Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently amended) A method in a data processing system for monitoring execution of instructions, the method comprising:

executing a program;

identifying a routine that is used more than a threshold during execution of the program as a routine of interest;

responsive to identifying [[a]] the routine of interest during execution of [[a]] the program, dynamically associating instructions in the identified routine of interest with a set of performance indicators to form a modified routine, wherein the set of performance indicators comprises one of a set of performance indicators located in fields within the instructions and a set of performance indicators located in a shadow memory, and wherein the set of performance indicators identify that the instructions are to be monitored; and

responsive to execution of an instruction in the modified routine during continued execution of the program, incrementing a counter, wherein the counter provides a value identifying a number of times that the instruction in the modified routine is executed.

2.   (Currently amended) The method of claim 1 further comprising:

associating instructions in a second routine of interest with a second set of performance indicators to form a second modified routine; and

responsive to execution of an instruction in the second modified routine, incrementing a second counter, wherein the second counter provides a value identifying a number of times that the instruction in the second modified routine is executed.

3-8.   (Canceled)

9.   (Currently amended) A data processing system for monitoring execution of instructions, the data processing system comprising:

executing means for executing a program;

identifying means for identifying a routine that is used more than a threshold during execution of the program as a routine of interest;

associating means, responsive to identifying [[a]] the routine of interest during execution of [[a]] the program, for dynamically associating instructions in the identified routine of interest with a set of performance indicators to form a modified routine, wherein the set of performance indicators comprises one of a set of performance indicators located in fields within the instructions and a set of performance indicators located in a shadow memory, and wherein the set of performance indicators identify that the instructions are to be monitored; and

incrementing means, responsive to execution of an instruction in the modified routine during continued execution of the program, for incrementing a counter, wherein the counter provides a value identifying a number of times that the instruction in the modified routine is executed.

10.   (Currently amended) The data processing system of claim 9 wherein the associating means is a first associating means and the incrementing means is a first incrementing means and further comprising:

second associating means for associating instructions in a second routine of interest with a second set of performance indicators to form a second modified routine; and

second incrementing means, responsive to execution of an instruction in the second modified routine, for incrementing a second counter, wherein the second counter provides a value identifying a number of times that the instruction in the second modified routine is executed.

11-16.   (Canceled)

17.   (Currently amended) A computer program product in a recordable-type computer readable medium for monitoring execution of instructions, the computer program product comprising:

first instructions for executing a program;

second instructions for identifying a routine that is used more than a threshold during execution of the program as a routine of interest;

[[first]] third instructions, responsive to identifying [[a]] the routine of interest during execution of [[a]] the program, for dynamically associating instructions in the identified routine of interest with a set of performance indicators to form a modified routine, wherein the set of performance indicators comprises one of a set of performance indicators located in fields within the instructions and a set of performance indicators located in a shadow memory, and wherein the set of performance indicators identify that the instructions are to be monitored; and

second fourth instructions, responsive to execution of an instruction in the modified routine during continued execution of the program, for incrementing a counter, wherein the counter provides a value identifying a number of times that the instruction in the modified routine is executed.

18.   (Currently amended) The computer program product of claim 17 further comprising:

[[third]] fifth instructions for associating instructions in a second routine of interest with a second set of performance indicators to form a second modified routine; and

fourth sixth instructions, responsive to execution of an instruction in the second modified routine, for incrementing a second counter, wherein the second counter provides a value identifying a number of times that the instruction in the second modified routine is executed.

19-24. (Canceled)